

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	854	549/531 or 203/23 or 203/86	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 15:55
L2	1	l1 and alkene and hydroperoxide and "alkene oxide" and solvent and compressed	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 16:11
L3	236	l1 and (propylene or propene) and (hydroperoxide or "hydrogen peroxide")and "propylene oxide"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 16:11
L4	19	l3 and (compressed or compression)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 16:12
L5	10	alkene and hydroperoxide and "alkene oxide" and solvent and compressed	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 16:11
L6	14809	(propylene or propene) and (hydroperoxide or "hydrogen peroxide")and "propylene oxide"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 16:11
L7	2975	l6 and (compressed or compression)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 16:13

## EAST Search History

L8	1084	l7 and (distill or distillation)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 16:14
L9	11	l8 and "heat exchange"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 16:51
L10	41	l8 and (decompression or refrigeration)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 17:43
L11	15	"5744619"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 17:43
S1	10	alkene and hydroperoxide and "alkene oxide" and solvent and compressed	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 15:56
S3	1	10/553516	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 14:51

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSPTADEG1625

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

\* \* \* \* \* Welcome to STN International \* \* \* \* \*

NEWS 1 Web Page for STN Seminar Schedule - N. America  
NEWS 2 JUL 02 LMEDLINE coverage updated  
NEWS 3 JUL 02 SCISEARCH enhanced with complete author names  
NEWS 4 JUL 02 CHEMCATS accession numbers revised  
NEWS 5 JUL 02 CA/Capplus enhanced with utility model patents from China  
NEWS 6 JUL 16 Capplus enhanced with French and German abstracts  
NEWS 7 JUL 18 CA/Capplus patent coverage enhanced  
NEWS 8 JUL 26 USPATFULL/USPAT2 enhanced with IPC reclassification  
NEWS 9 JUL 30 USGENE now available on STN  
NEWS 10 AUG 06 CAS REGISTRY enhanced with new experimental property tags  
NEWS 11 AUG 06 BEILSTEIN updated with new compounds  
NEWS 12 AUG 06 FSTA enhanced with new thesaurus edition  
NEWS 13 AUG 13 CA/Capplus enhanced with additional kind codes for granted patents  
NEWS 14 AUG 20 CA/Capplus enhanced with CAS indexing in pre-1907 records  
NEWS 15 AUG 27 Full-text patent databases enhanced with predefined patent family display formats from INPADOCDB  
NEWS 16 AUG 27 USPATOLD now available on STN  
NEWS 17 AUG 28 CAS REGISTRY enhanced with additional experimental spectral property data  
NEWS 18 SEP 07 STN AnaVist, Version 2.0, now available with Derwent World Patents Index  
NEWS 19 SEP 13 FORIS renamed to SOFIS  
NEWS 20 SEP 13 INPADOCDB enhanced with monthly SDI frequency  
NEWS 21 SEP 17 CA/Capplus enhanced with printed CA page images from 1967-1998  
NEWS 22 SEP 17 Capplus coverage extended to include traditional medicine patents  
  
NEWS EXPRESS 19 SEPTEMBER 2007: CURRENT WINDOWS VERSION IS V8.2, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 19 SEPTEMBER 2007.  
  
NEWS HOURS STN Operating Hours Plus Help Desk Availability  
NEWS LOGIN Welcome Banner and News Items  
NEWS IPC8 For general information regarding STN implementation of IPC 8

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

\* \* \* \* \* STN Columbus \* \* \* \* \*

FILE 'HOME' ENTERED AT 17:27:01 ON 20 SEP 2007

=> file caplus  
COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
0.21	0.21

FULL ESTIMATED COST

FILE 'CAPLUS' ENTERED AT 17:27:37 ON 20 SEP 2007  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP:USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 20 Sep 2007 VOL 147 ISS 13  
FILE LAST UPDATED: 19 Sep 2007 (20070919/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/infopolicy.html>

=> s (alkene or propene or propylene) and epoxidation and ("liquid alkene" or "liquid propene" or "liquid propylene" or "condensed alkene" or "condensed propylene" or "condensed propene") and (hydroperoxide or "hydrogen peroxide")

36601 ALKENE  
86730 ALKENES  
99840 ALKENE  
(ALKENE OR ALKENES)  
75473 PROPENE  
776 PROPENES  
75809 PROPENE  
(PROPENE OR PROPENES)  
190676 PROPYLENE  
305 PROPYLENES  
190775 PROPYLENE  
(PROPYLENE OR PROPYLENES)  
14745 EPOXIDATION  
247 EPOXIDATIONS  
14780 EPOXIDATION  
(EPOXIDATION OR EPOXIDATIONS)  
26320 EPOXIDN  
573 EPOXIDNS  
26409 EPOXIDN  
(EPOXIDN OR EPOXIDNS)  
28147 EPOXIDATION  
(EPOXIDATION OR EPOXIDN)  
789750 "LIQUID"  
137059 "LIQUIDS"  
892387 "LIQUID"  
( "LIQUID" OR "LIQUIDS" )  
1093039 "LIQ"  
103662 "LIQS"  
1132706 "LIQ"  
( "LIQ" OR "LIQS" )  
1569236 "LIQUID"  
( "LIQUID" OR "LIQ" )

36601 "ALKENE"  
 86730 "ALKENES"  
 99840 "ALKENE"  
     ("ALKENE" OR "ALKENES")  
     66 "LIQUID ALKENE"  
         ("LIQUID" (W) "ALKENE")  
 789750 "LIQUID"  
 137059 "LIQUIDS"  
 892387 "LIQUID"  
     ("LIQUID" OR "LIQUIDS")  
 1093039 "LIQ"  
 103662 "LIQS"  
 1132706 "LIQ"  
     ("LIQ" OR "LIQS")  
 1569236 "LIQUID"  
     ("LIQUID" OR "LIQ")  
     75473 "PROPENE"  
         776 "PROPENES"  
         75809 "PROPENE"  
             ("PROPENE" OR "PROPENES")  
         85 "LIQUID PROPENE"  
             ("LIQUID" (W) "PROPENE")  
 789750 "LIQUID"  
 137059 "LIQUIDS"  
 892387 "LIQUID"  
     ("LIQUID" OR "LIQUIDS")  
 1093039 "LIQ"  
 103662 "LIQS"  
 1132706 "LIQ"  
     ("LIQ" OR "LIQS")  
 1569236 "LIQUID"  
     ("LIQUID" OR "LIQ")  
     190676 "PROPYLENE"  
         305 "PROPYLENES"  
         190775 "PROPYLENE"  
             ("PROPYLENE" OR "PROPYLENES")  
         751 "LIQUID PROPYLENE"  
             ("LIQUID" (W) "PROPYLENE")  
 125182 "CONDENSED"  
     36601 "ALKENE"  
     86730 "ALKENES"  
     99840 "ALKENE"  
         ("ALKENE" OR "ALKENES")  
     1 "CONDENSED ALKENE"  
         ("CONDENSED" (W) "ALKENE")  
 125182 "CONDENSED"  
 190676 "PROPYLENE"  
     305 "PROPYLENES"  
 190775 "PROPYLENE"  
     ("PROPYLENE" OR "PROPYLENES")  
     5 "CONDENSED PROPYLENE"  
         ("CONDENSED" (W) "PROPYLENE")  
 125182 "CONDENSED"  
     75473 "PROPENE"  
     776 "PROPENES"  
     75809 "PROPENE"  
         ("PROPENE" OR "PROPENES")  
     1 "CONDENSED PROPENE"  
         ("CONDENSED" (W) "PROPENE")  
     33681 HYDROPEROXIDE  
     15336 HYDROPEROXIDES  
     39996 HYDROPEROXIDE  
         (HYDROPEROXIDE OR HYDROPEROXIDES)  
 1015605 "HYDROGEN"  
     6041 "HYDROGENS"

1018965 "HYDROGEN"  
("HYDROGEN" OR "HYDROGENS")  
220699 "PEROXIDE"  
48207 "PEROXIDES"  
239693 "PEROXIDE".  
("PEROXIDE" OR "PEROXIDES")  
121842 "HYDROGEN PEROXIDE"  
("HYDROGEN" (W) "PEROXIDE")

L1 8 (ALKENE OR PROPENE OR PROPYLENE) AND EPOXIDATION AND ("LIQUID  
ALKENE" OR "LIQUID PROPENE" OR "LIQUID PROPYLENE" OR "CONDENSED  
ALKENE" OR "CONDENSED PROPYLENE" OR "CONDENSED PROPENE") AND  
(HYDROPEROXIDE OR "HYDROGEN PEROXIDE")

=> d l1 abs ibib

L1 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN  
 AB The method comprises epoxidizing liquid propylene with  
 liquid organic hydroperoxide in the presence of a catalyst, wherein  
 temperature of propylene gas introduced into the inlet of a compressor  
 to compress is higher than that saturation temperature The method  
 prevents the drain  
 formation with supplying the gas at the temperature which is higher than  
 dew-point temperature of the gas which is supplied to the compressor.  
 ACCESSION NUMBER: 2005:297624 CAPLUS  
 DOCUMENT NUMBER: 142:355703  
 TITLE: Method for production of propylene oxide  
 INVENTOR(S): Shinohara, Koji; Omae, Shunichi  
 PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005089404	A	20050407	JP 2003-327709	20030919
PRIORITY APPLN. INFO.:			JP 2003-327709	20030919

=> d 11 2-8 abs ibib

L1 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN  
AB A method is described for producing an epoxide (e.g., propylene oxide) comprising: (i) preparation of a stream (S1) containing a compressed liquid alkene (e.g., propylene); (ii) expansion of at least part of the stream (S1) by heat absorption and at least partial evaporation of the liquid alkene; (iii) reaction of the alkene obtained according to step (ii) with a hydroperoxide (e.g., hydrogen peroxide) in the presence of at least one solvent (e.g., methanol) and at least one catalyst (e.g., titanium silicalite) to obtain a mixture containing the epoxide and the solvent(s).  
ACCESSION NUMBER: 2004:902364 CAPLUS  
DOCUMENT NUMBER: 141:380278  
TITLE: Method for producing an epoxide  
INVENTOR(S): Goebbel, Hans-Georg; Bassler, Peter; Teles, Joaquim Henrique; Rudolf, Peter  
PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Germany  
SOURCE: PCT Int. Appl., 27 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004092149	A1	20041028	WO 2004-EP4077	20040416
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CE, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, SD, SI, SE, TG, UG, ZM, ZW, AM, AE, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
DE 10317520	A1	20041104	DE 2003-10317520	20030416
CA 2522466	A1	20041028	CA 2004-2522466	20040416
EP 1620415	A1	20060201	EP 2004-727858	20040416
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK			
BR 2004009425	A	20060425	BR 2004-9425	20040416
CN 1791587	A	20060621	CN 2004-80013456	20040416
US 2006276662	A1	20061207	US 2005-553516	20051014
IN 2005CN02639	A	20070831	IN 2005-CN2639	20051014
PRIORITY APPLN. INFO.:			DE 2003-10317520	A 20030416
			WO 2004-EP4077	W 20040416

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE  
FORMAT

L1 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN  
AB The invention relates to a method of regenerating a solid catalyst used for an epoxidn. of propylene and an organic peroxide such as cumene hydroperoxide in a reactor filled with the solid catalyst, wherein a liquid such as propylene passes through the reactor at a temperature higher than the maximum temperature of the epoxidn. by 25° to regenerate the solid catalyst.  
ACCESSION NUMBER: 2002:704699 CAPLUS  
DOCUMENT NUMBER: 137:222566  
TITLE: Method of regenerating solid catalyst  
INVENTOR(S): Tsuji, Junpei; Otsuki, Shunichi  
PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002263505	A	20020917	JP 2001-71781	20010314
TW 224523	B	20041201	TW 2002-91104030	20020305
CA 2440602	A1	20020919	CA 2002-2440602	20020307
WO 2002072255	A1	20020919	WO 2002-JP2102	20020307
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CE, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SI, SE, TG, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
AU 2002236240	A1	20020924	AU 2002-236240	20020307
EP 1371414	A1	20031217	EP 2002-702781	20020307
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
BR 200208058	A	20040302	BR 2002-8058	20020307
CN 1501839	A	20040602	CN 2002-806414	20020307
US 2004082800	A1	20040429	US 2003-471421	20030911
US 6982235	B2	20060103		
IN 2003CN01449	A	20051125	IN 2003-CN1449	20030915
PRIORITY APPLN. INFO.:			JP 2001-71781	A 20010314
			WO 2002-JP2102	W 20020307

L1 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN  
AB In a system for manufacturing propylene oxide by epoxidn. of liquid propylene (I) with liquid organic hydroperoxide in the presence of a catalyst, 22 pumps are equipped in parallel in a passage, through which I is supplied. In this system, supply of I is ensured, thus preventing deactivation of the catalyst even in an emergency case where one of the I-supplying pumps is terminated.  
ACCESSION NUMBER: 2003:274775 CAPLUS  
DOCUMENT NUMBER: 138:272089  
TITLE: System for manufacturing propylene oxide and its manufacture  
INVENTOR(S): Kato, Masaaki; Omae, Shunichi; Shinohara, Kei  
PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003104979	A	20030409	JP 2001-299008	20010928
PRIORITY APPLN. INFO.:			JP 2001-299008	20010928

L1 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN  
AB Titanovanadosilicalites are very selective and active catalysts in the epoxidn. of olefins by peroxides. Diluted H2O2 suffices to afford high yields of the epoxide. V incorporation at levels of Si/V = 100-2500 effectively changes the characteristics of the titanosilicalite into which it is incorporated to give near quant. conversion of propylene at selectivities >90%. For example, reacting liquid propylene with H2O2 (30% aqueous solution) in MeOH for 6 h at 35°/500 psi under N in the presence of K-exchanged Ti-V-silicalite catalyst (average particle size 130 nm; preparation given) gave 95% propylene oxide with propylene conversion >99%.  
ACCESSION NUMBER: 1998:263255 CAPLUS  
DOCUMENT NUMBER: 128:321554  
TITLE: Titanovanadosilicalites as epoxidation catalysts for olefins  
INVENTOR(S): Nemeth, Laszlo T.; Lewis, Gregory J.; Rosin, Richard R.  
PATENT ASSIGNEE(S): UOP LLC, USA  
SOURCE: U.S., 7 pp.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 4  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5744619	A	19980428	US 1997-818265	19970317
ZA 9806223	A	19990202	ZA 1998-6223	19980713
CA 2243009	A1	20000113	CA 1998-2243009	19980713
CA 2243009	C	20070619		
EP 978315	A1	20000209	EP 1998-305563	19980713
EP 978315	B1	20030924		
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO			
ES 2206845	T3	20040516	ES 1998-305563	19980713
IN 1998DE01993	A	20060113	IN 1998-DE1993	19980713
CN 1241564	A	20000119	CN 1998-103371	19980714
AU 9876141	A	20000203	AU 1998-76141	19980714
PRIORITY APPLN. INFO.:			US 1997-818265	A 19970317
			US 1997-840531	A 19970422
			EP 1998-305563	A 19980713
			JP 1998-199271	A 19980714

OTHER SOURCE(S): CASREACT 128:321554  
REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE  
FORMAT

L1 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN  
 AB Epoxides are prepared in the liquid phase by reacting an ethylenically unsatd. compound with 1 part organic hydroperoxide in 4-20 parts anhydrous organic solvent at 80-160° in the presence of molybdate catalyst. The molybdate, which has good solubility in the organic medium, a high concentration in Mo, very high catalytic activity, weak acidity, and high purity, is present in a concentration of 10-4 to 2 + 10-3 mole/kg. solvent and hydroperoxide. Thus, 400 g. com. MoO3.H2O containing 90% MoO3 was dissolved in 900 g. concentrated HCl (d. 1.19) preheated to 90°, the mixture cooled to room temperature, the molybdic chloride separated from the reaction mixture by extracting twice with a total of 2 l. Et2O, the ether solution dried and evaporated to give 905 g. colorless crystals, the crystals redissolved in dry ether, 440 g. propylene oxide in 500 cc. Et2O added to the solution at 10-15° during 3 hrs., the mixture stirred 1 hr. and the precipitate filtered off and washed with dry ether, water-saturated ether, and then dry ether and dried at 40° under vacuum to give 465 g. propylene glycol molybdate (MoO4C3H6) (I) containing 71.9% MoO3. I (I g.) was dissolved in 1 g. propylene glycol at 100°, the product mixed with 500 g. tert-BuOH, 500 g. 99% tert-BuOOH added to give a solution containing 5 + 10-3 g. atoms Mo/kg., 10 cc. of this solution and 20 cc. liquid propylene at -80° were sealed in a pressure-resistant glass tube, heated to 110°, cooled to -80°, and degassed to give a solution containing approx. 10% propylene oxide with a 79% conversion of hydroperoxide.

ACCESSION NUMBER: 1969:471417 CAPLUS  
 DOCUMENT NUMBER: 71:71417  
 TITLE: Epoxides: molybdate catalysis  
 INVENTOR(S): Poite, Michel  
 PATENT ASSIGNEE(S): Naphtachimie  
 SOURCE: Fr., 5 pp. CODEN: FRXXAK  
 DOCUMENT TYPE: Patent  
 LANGUAGE: French  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 1550166		19681220	FR	19670811

L1 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN  
 AB Olefins are contacted in the liquid phase with tert-BuOOH at 50-200° in the presence of a Mo metal catalyst whereby the ratio Mo metal surface to the number of g. hydroperoxide is 1-20 cm.2/g. Thus, 100 g. liquid propylene was contacted with 22.4 g. tert-BuOOH, 22.4 g. tert-BuOH, 140 g. xylene, and the Mo metal catalyst. The following results were obtained (ratio cm.2/g., reaction time, min. temperature, conversion in mol. %, and yield of epoxide with respect to converted hydroperoxide given): 23.3, 60, 110-11°, 90.8, 64.7; 23.3, 20, 110-11°, 52.7, 72.5; 3.9, 60, 110-11°, 82.5, 75.2; 3.9, 20, 110-11°, 32.1, 90.5; 23.3, 60, 105-6°, 73.5, 74.7; 3.9, 60, 105-6°, 75.7, 79.2. A mixture containing 1.73 g. 1-octene, 0.513 g. tert-BuOOH, and a Mo metal plate with a total surface of 1.8 cm.2 was heated at 102° and kept 20 min. at 102° (ratio Mo metal to tert-BuOOH was 3.5 cm.2/g.) to give a conversion of 37 mole % and a yield of 100 mole %.

ACCESSION NUMBER: 1967:432577 CAPLUS  
 DOCUMENT NUMBER: 67:32577  
 ORIGINAL REFERENCE NO.: 67:6155a  
 TITLE: Epoxides  
 PATENT ASSIGNEE(S): Atlantic Refining Co.  
 SOURCE: Neth. Appl., 8 pp. Addn. to Neth. Appl. 6517166  
 CODEN: NAXXAN  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Dutch  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
NL 6605821		19670102	NL 1966-5821	19660429
DE 1568001			DE	
FR 89938			FR	
GB 1146202			GB	
PRIORITY APPLN. INFO.:			US	19650701

L1 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN  
 AB The title compds. are prepared by contacting C2-4 olefins with a C4-8 tert-alkyl hydroperoxide at 50-200° in an organic solvent containing at least 20% by weight hydrocarbon in the presence of metallic Mo or a Mo compound. Thus, expts. were carried out with 25 g. 94% tert-BuOOH and 0.05 g. Mo(CO)6 as catalyst while tert-BuOH and C6H6 were used as solvent. To this mixture was added 100 cc. liquid propylene and the reaction carried out 1 hr. at 110-11°. The following results were obtained (tert-BuOH in g., C6H6 in g., C6H6 % by weight, conversion in mole %, and yield of 1,2-epoxypropane in mole % given): 0, 125, 100, 92.2, 88.8 (at a reaction temperature of 106°); 25, 100, 80, 82.0, 89.3; 50, 75, 60, 70.8, 84.8; 75, 50, 40, 58.3, 86.0; 100, 25, 20, 47.0, 86.5; 125, 0, 0, 43.0, 77.2. A similar experiment with 25 g. tert-BuOOH, 0.05 g. Mo(CO)6, and 125 g. tert-BuOH and no hydrocarbon solvent gave, when treated with 100 cc. liquid propylene 1 hr. at 106°, 43.5 mole % conversion and 64.3 mole % yield of 1,2-epoxypropane. Under optimum conditions a yield of 75 mole % and a conversion of 89 mole % were obtained. Similarly, 22.4 g. tert-BuOOH (100 %), 22.4 g. tert-BuOH, 0.1 g. Mo(CO)6, 100 cc. liquid propylene allowed to react 1 hr. at 110-11° gave with 120 g. xylene (isomeric mixture) 93.7 mole % conversion and 70.0 mole % yield. The use of 140 g. xylene gave 91.7 mole % conversion and 80.2 mole % yield. The latter experiment carried out with other catalysts gave the following results (amount of catalyst, catalyst, conversion, and yield in mole % given): 0.05 g. MoCl5, 92.0, 82.0; 1.5 g., MoO2 (freshly prepared by reduction of Na2MoO4 with NH2.NH2), 95.0, 74.0; 0.1 g. powdered Mo, 92.1, 71.5.

ACCESSION NUMBER: 1967:432576 CAPLUS  
 DOCUMENT NUMBER: 67:32576  
 ORIGINAL REFERENCE NO.: 67:6154h, 6155a  
 TITLE: Epoxides  
 PATENT ASSIGNEE(S): Atlantic Refining Co.  
 SOURCE: Neth. Appl., 12 pp. Addn. to Neth. Appl. 6517166  
 CODEN: NAXXAN  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Dutch  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
NL 6605820		19670102	NL 1966-5820	19660429
DE 1568002			DE	
FR 89937			FR	
GB 1149344			GB	
PRIORITY APPLN. INFO.:			US	19650701

=> FIL STNGUIDE  
COST IN U.S. DOLLARS

SINCE FILE ENTRY	TOTAL SESSION
69.29	69.50

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE ENTRY	TOTAL SESSION
-6.24	-6.24

CA SUBSCRIBER PRICE

FILE 'STNGUIDE' ENTERED AT 17:38:29 ON 20 SEP 2007  
USE IS SUBJECT TO THE TERMS OF YOUR CUSTOMER AGREEMENT  
COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)

FILE CONTAINS CURRENT INFORMATION.  
LAST RELOADED: Sep 14, 2007 (20070914/UP).

=> log hold  
COST IN U.S. DOLLARS

SINCE FILE ENTRY	TOTAL SESSION
0.48	69.98

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE ENTRY	TOTAL SESSION
0.00	-6.24

CA SUBSCRIBER PRICE

SESSION WILL BE HELD FOR 120 MINUTES  
STN INTERNATIONAL SESSION SUSPENDED AT 17:43:11 ON 20 SEP 2007